FORM PTO-1449 (Modified)
U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Use several sheets if necessary)

(37 CPR 1.98(b))

Atty Docket No.: 153454600017

Serial No.: 10/823,257
Applicant(s): Quintero Illera et al.
Filing Date: April 13, 2004
Group: ~~Not Yet Assigned~~ 2821

U.S. PATENT DOCUMENTS

Exam. Init.		Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date
TP	2002/	0 0 0 0 9 4 0	01/03/2002	Moren et al.			
	2002/	0 0 0 0 9 4 2	01/03/2002	Duroux			
	2002/	0 0 3 6 5 9 4	03/28/2002	Gyenes			
	2002/	0 1 0 5 4 6 8	08/08/2002	Tessler et al.			
	2002/	0 1 0 9 6 3 3	08/15/2002	Ow et al.			
	2002/	0 1 2 6 0 5 4	09/12/2002	Fuerst et al.			
	2002/	0 1 2 6 0 5 5	09/12/2002	Lindenmeier et al.			
	2002/	0 1 7 5 8 6 6	11/28/2002	Gram			
		3 5 2 1 2 8 4	07/21/1970	Shelton, Jr. et al.			
		3 5 9 9 2 1 4	08/10/1971	Altmayer			
		3 6 2 2 8 9 0	11/23/1971	Fujimoto et al.			
		3 6 8 3 3 7 6	08/08/1972	Pronovost			
		3 8 1 8 4 9 0	06/18/1974	Leahy			
		3 9 6 7 2 7 6	06/29/1976	Goubau			
		3 9 6 9 7 3 0	07/13/1976	Fuchser			
		4 0 2 4 5 4 2	05/17/1977	Ikawa et al.			
		4 1 3 1 8 9 3	12/26/1978	Munson et al.			
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		4 4 7 1 4 9 3	09/11/1984	Schober			
		4 5 0 4 8 3 4	03/12/1985	Garay et al.			
		4 5 4 3 5 8 1	09/24/1985	Nemet			
		4 5 7 1 5 9 5	02/18/1986	Phillips et al.			
		4 5 8 4 7 0 9	04/22/1986	Kneisel et al.			
		4 5 9 0 6 1 4	05/20/1986	Erat			
		4 6 2 3 8 9 4	11/18/1986	Lee et al.			
		4 6 7 3 9 4 8	06/16/1987	Kuo			
		4 7 3 0 1 9 5	03/08/1988	Phillips et al.			
		4 8 3 9 6 6 0	06/13/1989	Hadzoglou			
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		4 8 4 9 7 6 6	07/18/1989	Inaba et al.			
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		4 8 9 4 6 6 3	01/16/1990	Urbish et al.			
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FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

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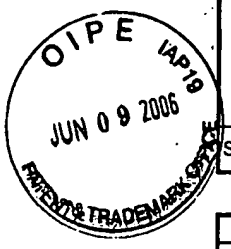
	0	2	0	9	6	1	6	6	11/28/2002	PCT					

		OTHER DOCUMENTS (Including Author, Title, Date**, Relevant pages, Place of Publication***)
TP		Ali, M. et al., "A Triple-Band Internal Antenna for Mobile Hand-held Terminals," IEEE, pp. 32-35 (1992)
		Romeu, Jordi et al., "A Three Dimensional Hilbert Antenna," IEEE, pp. 550-553 (2002)
		Parker et al., "Microwaves, Antennas & Propagation," IEEE Proceedings H, pp. 19-22 (February 1991)
		Hansen, R.C., "Fundamental Limitations in Antennas," Proceedings of the IEEE, Vol. 69, No. 2, pp. 170-182 (February 1981)
		Jaggard, Dwight L., "Fractal Electrodynamics and Modeling," Directions in Electromagnetic Wave Modeling, pp. 435-446 (1991)
		Hohlfeld, Robert G. et al., "Self-Similarity and the Geometric Requirements for Frequency Independence in Antennae," Fractals, Vol. 7, No. 1, pp. 79-84 (1999)
		Samavati, Hirad, et al., "Fractal Capacitors," IEEE Journal of Solid-State Circuits, Vol. 33, No. 12, pp. 2035-2041 (December 1998)
		Pribetich, P., et al., "Quasifractal Planar Microstrip Resonators for Microwave Circuits," Microwave and Optical Technology Letters, Vol. 21, No. 6, pp. 433-436 (June 20, 1999)
		Zhang, Dawei, et al., "Narrowband Lumped-Element Microstrip Filters Using Capacitively-Loaded Inductors," IEEE MTT-S Microwave Symposium Digest, pp. 379-382 (May 16, 1995)
		Gough, C.E., et al., "High Tc coplanar resonators for microwave applications and scientific studies," Physica C, NL, North-Holland Publishing, Amsterdam, Vol. 282-287, No. 2001, pp. 395-398 (August 1, 1997)
		Radio Engineering Reference--Book by H. Meinke and F.V. Gundlah, Vol. I, Radio components. Circuits with lumped parameters. Transmission lines. Wave-guides. Resonators. Arrays. Radio waves propagation, States Energy Publishing House, Moscow, with English translation (1961) [4 pp.]
		V.A. Volgov, "Parts and Units of Radio Electronic Equipment (Design & Computation)," Energiya, Moscow, with English translation (1967) [4 pp.]
		Puente, C., et al., "Multiband properties of a fractal tree antenna generated by electrochemical deposition," Electronics Letters, IEE Stevenage, GB, Vol. 32, No. 25, pp. 2298-2299 (December 5, 1996)
		Puente, C., et al., "Small but long Koch fractal monopole," Electronics Letters, IEE Stevenage, GB, Vol. 34, No. 1, pp. 9-10 (January 8, 1998)
		Puente Baliarda, Carles, et al., "The Koch Monopole: A Small Fractal Antenna," IEEE Transactions on Antennas and Propagation, New York, US, Vol. 48, No. 11, pp. 1773-1781 (November 1, 2000)
		Cohen, Nathan, "Fractal Antenna Applications in Wireless Telecommunications," Electronics Industries Forum of New England, 1997. Professional Program Proceedings Boston, MA US, May 6-8, 1997, New York, NY US, IEEE, US pp. 43-49 (May 6, 1997)
		Anguera, J. et al. "Miniature Wideband Stacked Microstrip Patch Antenna Based on the Sierpinski Fractal Geometry," IEEE Antennas and Propagation Society International Symposium, 2000 Digest. Aps., vol. 3 of 4, pages 1700-1703 (July 16, 2000)
		Hara Prasad, R.V., et al., "Microstrip Fractal Patch Antenna for Multi-Band Communication," Electronics Letters, IEE Stevenage, GB, vol. 36, no. 14, pages 1179-1180 (July 6, 2000)

TP		Borja, C. et al., "High Directivity Fractal Boundary Microstrip Patch Antenna," Electronics Letters. IEE Stevenage, GB, vol. 36, no. 9, pages 778-779 (April 27, 2000)
↓		Sanad, Mohamed, "A Compact Dual-Broadband Microstrip Antenna Having Both Stacked and Planar Parasitic Elements," IEEE Antennas and Propagation Society International Symposium 1998 Digest, July 21-26, 1998, pp. 6-9
Examiner	THO PHAN	Date Considered 6/30/06

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALTERNATIVE TO PTO/SB/08a/b (07-05)



Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 1

Complete if Known	
Application Number	10/823257-Conf. #3496
Filing Date	April 13, 2004
First Named Inventor	Ramiro Quintero Illera
Art Unit	2821
Examiner Name	T. G. Phan
Attorney Docket Number	68349-00011USPX

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
TP	A1*	US-6,545,640	04-08-2003	Herve et al.
	A2*	US-6,606,062-A1	08-12-2003	Ngounou Kouam et al.
	A3*	US-6,664,932-A1	12-16-2003	Sabet et al.
↓	A4*	US-20020003499-A1	12-17-2002	Kouam et al.

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T[6]
TP	B1	EP-1128466	08-29-2001	Filtronic LK Oy	
↓	B2	WO-02/095874	11-28-2002	Raytheon Company	

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
TP	C1	"Small Ciculatory Polarized Microstrip Antennas" by Wen-Shyang Chen, Department of Electronic Engineering, Cheng-Shiu Institute of Technology, 1999 IEEE.	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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